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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,674	07/20/2000	Antonio Pietro Sanfilippo	YAMAP0728US	9336

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Neil A DuChez  
Renner Otto Boisselle & Sklar  
1621 Euclid Avenue 19th Floor  
Cleveland, OH 44115

EXAMINER

SAIN, GAUTAM

ART UNIT PAPER NUMBER

2176

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/600,674

Applicant(s)

SANFILIPPO, ANTONIO PIETRO

Examiner

Gautam Sain

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 17, 2004 has been entered.

### ***Claim Rejections - 35 USC § 103***

2) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**2-1) Claims 1, 2, 3, 7, 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereinafter "AAPA"), in view of Inaba et al (6154737, filed May 1997).**

**Regarding claim 1**, AAPA teaches "a plurality of ... and each text unit having a same structure" (ie., the text example shows text units with a same sentence structure)(page 4, lines 3-20).

AAPA teaches "forming a structure ... string occurs" (ie., the table shows string pairs as referred to on page 4 between '#', the table associates the strings with the words shared in the strings-text units)(page 5, table).

AAPA teaches "for each text unit ... each pair of text units" (ie., table showing number of shared words in each text unit pair provides the individual score for that pair – referring to the Hoey reference and table 1)(page 5, lines 15-20; Table).

AAPA does not teach, but Inaba teaches "processing ... and other text units" (ie., word co-occurrence index for storing word co-occurrence)(col 4, lines 17-23; lines 30-34; lines 53-56). Specifically, this is the degree of coincidence between the document text and words.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify AAPA to include a word co-occurrence index for storing the degree of coincidence between the document text and words as taught by Inaba, providing the benefit of a document retrieval system which flexibly receives a retrieval request from the user and conducts the retrieving and ranking operations to produce a precise retrieval result with less refuse and which is capable to shortening the retrieval time (Inaba, col 2, lines 59-65).

**Regarding claim 2**, AAPA teaches "ranking ... scores" (ie., ranking shows a final score comparison of text units as compared to other units)(page 6, lines 1-16).

**Regarding claim 3**, AAPA teaches "text units are sentences ... comprises ... stemmed word occurs" (ie., sentences; "#2#" is a sentence )(page 1/1, lines 4; page

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4)(ie., shared non-stop words where stopwords listed on pages 2 and 3 are removed from the string)(page 3).

**Regarding claim 7**, AAPA teaches “calculating ... threshold value” (ie., once final score is counted, ranking the text units according to their final score for the ones above a threshold of 2).

**Regarding claim 8**, AAPA does not expressly teach but it was commonly known to those of ordinary skill in the art that “storage medium ... data processor” (ie., AAPA discloses machine readable document generation from the document)(page 1, lines 15-24) for the purpose of scoring text units to form a cohesive subtext for topic aptness (page 1, Technical field section).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify AAPA to include machine readable document generation from the document for the purpose recognized in the art of lexical connectivity, as discussed above).

**Regarding claim 9**, AAPA teaches “ranking text units in a text, ... data processor” (ie., ranking text units according to score)(page 6, lines 10-15).

**2-2) Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereinafter “AAPA”), in view of Inaba et al (as cited above), further in view of Liddy et al (US 5873056, filed Oct 1993).**

**Regarding claim 4**, AAPA in view of Inaba does not expressly teach, but Liddy teaches “text is associated ... codes associated with said words” (ie., subject code in lexical database... meanings of a word assigns subject codes ...)(col 1, lines 29-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify AAPA in view of Inaba to include a subject codes in a lexical database with words as taught by Liddy, providing the benefit of classifying documents by their general subject matter and retrieving documents relevant to a query and producing a text level semantic representation of a document (Abstract, bottom; col 2, lines 65-67).

**2-3) Claim 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereinafter "AAPA"), in view of Inaba et al (as cited above), further in view of Liddy et al (as cited above), Baker et al (US 5680511, issued Oct 1997).**

**Regarding claim 5**, AAPA in view of Inaba and Liddy does not teach, but Baker teaches "keeping a record ... said pair of text units" (ie., an ambiguity recognition system that recognizes a sequence of words in a document before breaking the words into smaller components and analyzing each word individually (col 1, lines 50-57). The examiner interprets that the claim is trying to achieve a method to reduce duplication in text units by breaking words down in smaller units in order to analyze portions (ie., analysis of binary sequence of a word). Similar to this interpretation, Baker teaches a word recognition system that breaks down a text unit into it's components in order to compare with other text units of similar word by comparing the components.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify AAPA in view of Inaba and Liddy to include an ambiguity recognition system that recognizes a sequence of words in a document before breaking the words

into smaller components and analyzing each word individually a taught by Baker, providing the benefit of providing a language model that can recognize words in a data string for context and meaning requiring less training data and less training time (col 4, lines 53-61).

**Regarding claim 6**, AAPA in view of Inaba and Liddy does not expressly teach, but Baker teaches "disregarding ... word text" (ie., an ambiguity recognition system which recognizes ambiguous words within a passage of words including a spell checking for detecting unknown words)(col 1, lines 50-57; col 11, lines 3-5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify AAPA in view of Inaba and Liddy to include an ambiguity recognition system that recognizes a sequence of words in a document before breaking the words into smaller components and analyzing each word individually including a spell checking for detecting unknown words a taught by Baker, providing the benefit of providing a language model that can recognize words in a data string for context and meaning requiring less training data and less training time (col 4, lines 53-61).

### ***Response to Arguments***

3) Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

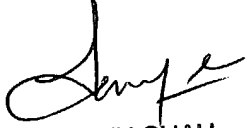
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam Sain whose telephone number is 703-305-8777. The examiner can normally be reached on M-F 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (703)305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SANJIV SHAH  
PRIMARY EXAMINER